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## MEMORANDUM

16 October 2016  
File No. 40616-108

SUBJECT: Post-Closure Care Plan  
Associated Electric Cooperative, Inc.  
New Madrid Power Plant – Utility Waste Landfill  
New Madrid, MO

Haley & Aldrich, Inc. has developed this Post-Closure Plan (Plan) on behalf of Associated Electric Cooperative, Inc. (AECI) for the existing, active coal combustion residuals (CCR) Utility Waste Landfill (UWL) at the New Madrid Power Plant (NMPP), located in New Madrid, MO. This Plan addresses the requirements of §257.104 *Post-closure care requirements*, specifically section §257.104(d) for written post-closure plans, of the US Environmental Protection Agency's (EPA's) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 40 CFR Part 257 (CCR Rule) effective 19 October 2015. The information required for the Plan for the Landfill is presented in the following sections in accordance with §257.104(d) of the CCR Rule.

*§257.104(d)(1)(i): A description of the monitoring and maintenance activities required in paragraph (b) of this section for the CCR unit, and the frequency at which these activities will be performed.*

*§257.104(b): Post-closure care maintenance requirements. Following closure of the CCR unit, the owner or operator must conduct post-closure care for the CCR unit, which must consist of at least the following:*

*§257.104(b)(1): Maintaining the integrity and effectiveness of the final cover system, including making repairs to the final cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover;*

*§257.104(b)(2): If the CCR unit is subject to the design criteria under § 257.70, maintaining the integrity and effectiveness of the leachate collection and removal system and operating the leachate collection and removal system in accordance with the requirements of § 257.70; and*

*§257.104(b)(3): Maintaining the groundwater monitoring system and monitoring the groundwater in accordance with the requirements of §§ 257.90 through 257.98.*

In accordance with §257.104(c) of the CCR Rule, AECI will conduct post-closure care activities for 30 years following completion of closure activities of the UWL. This assumes that the site is not under groundwater monitoring assessment monitoring under the CCR Rule. In the event that the unit is under assessment monitoring, post-closure care activities continue to be implemented beyond the 30-year timeframe until the groundwater monitoring program returns to detection monitoring in accordance with §257.95.

The final cover system including stormwater controls will be inspected on a yearly basis, at minimum, by appropriate personnel for settlement, seepage, erosion, scarps, sloughs, stormwater ponding on the final cover system, wind erosion, storm water erosion, animal burrows, and overall integrity of the final cover system. In addition, run-on and run-off controls will be inspected for signs of erosion and seepage. As determined necessary to maintain the structural integrity of the final cover system and storm water controls, the final cover system and its components will be repaired for any noted deficiencies.

The leachate collection and removal system will be operated and maintained to collect and remove leachate from the landfill during the post-closure care period. In accordance with §257.70, the leachate collection and removal system will be operated to maintain less than a 30-centimeter depth of leachate over the liner and operated to minimize clogging during the post-closure care period. The leachate collection and removal system will be inspected on a yearly basis, at minimum, by appropriate personnel for signs of clogging or conditions otherwise indicating that the system requires maintenance. As determined necessary to maintain the functionality of the leachate collection and removal system, the system will be repaired for any noted deficiencies.

During the post-closure care period, AECl will maintain the integrity of any unit monitoring wells, bollards, well surface completion, and sampling equipment in secure and proper working condition for the required sampling intervals. The monitoring wells and sampling equipment will be inspected at each sampling event. Any identified damage or deficiency in the integrity of the monitoring wells or components will be repaired to maintain the integrity of the system. The monitoring wells will then be re-surveyed if surface completions are modified.

Applicable requirements associated with AECl's MDNR utility waste landfill permit post-closure care will also be completed if more stringent than those required by the CCR Rule.

*§257.104(d)(1)(ii): The name, address, telephone number, and email address of the person or office to contact about the facility during the post-closure care period.*

Name:	AECl, Corporate Communications
Address:	2814 South Golden Avenue Springfield, MO 65801-0754
Telephone Number:	(417) 881-1204
Email Address:	ccr@aeci.org

*§257.104(d)(1)(iii): A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other component of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this subpart. Any other disturbance is allowed if the owner or operator of the CCR unit demonstrates that disturbance of the final cover, liner, or other component of the containment system, including any removal of CCR, will not increase the potential threat to human*

*health or the environment. The demonstration must be certified by a qualified professional engineer, and notification shall be provided to the State Director that the demonstration has been placed in the operating record and on the owners or operator's publicly accessible Internet site.*

After closure of the UWL, AECl intends to maintain the property as part of the industrialized site with no public access. AECl has no planned uses for the property during the post-closure period at this time. As such, post-closure use of the property shall not disturb the integrity of the containment system. AECl will amend this Plan at the appropriate time if planned uses of the property change.

§257.104(d)(2): *Deadline to prepare the initial written post-closure plan*

- i. Existing CCR landfills and existing CCR surface impoundments. No later than October 17, 2016, the owner or operator of the CCR unit must prepare an initial written post-closure plan consistent with the requirements specified in paragraph (d)(1) of this section.*
- ii. New CCR landfills, new CCR surface impoundments, and any lateral expansion of a CCR unit. No later than the date of the initial receipt of CCR in the CCR unit, the owner or operator must prepare an initial written post-closure plan consistent with the requirements specified in paragraph (d)(1) of this section.*

This document serves as the initial written post-closure plan.

§257.104(d)(3): *Amendment of a written post-closure plan.*

- i. The owner or operator may amend the initial or any subsequent written post-closure plan developed pursuant to paragraph (d)(1) of this section at any time.*
- ii. The owner or operator must amend the written closure plan whenever:*
  - A. There is a change in the operation of the CCR unit that would substantially affect the written post-closure plan in effect; or*
  - B. After post-closure activities have commenced, unanticipated events necessitate a revision of the written post-closure plan.*
- iii. The owner or operator must amend the written post-closure plan at least 60 days prior to a planned change in the operation of the facility or CCR unit, or no later than 60 days after an unanticipated event requires the need to revise an existing written post-closure plan. If a written post-closure plan is revised after post-closure activities have commenced for a CCR unit, the owner or operator must amend the written post-closure plan no later than 30 days following the triggering event.*

This initial Plan or any subsequent version of the Post-Closure Plan will be assessed and amended whenever there is a change in operation of the UWL that would substantially affect the Plan or when unanticipated events necessitate a revision of the Plan either before or after closure activities have commenced and been completed in accordance with §257.104(d)(3). Revisions to the Plan will be made in accordance with §257.104(d)(3)(iii) as stated above.

Any amendments to the Plan will include written certification from a qualified professional engineer that the amendments to the Plan meet the requirements of the CCR Rule.  
A record of amendments to the plan will be tracked below. The latest version of the Plan will be noted on the first page of the Plan.

Version	Date	Description of Changes Made
1	16 October 2016	Initial Issuance

*§257.104(d)(4): The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the initial and any amendment of the written post-closure plan meets the requirements of this section.*

I certify that this initial Written Post-Closure Plan for AECl's Utility Waste Landfill at the New Madrid Power Plant meets the USEPA's CCR Rule requirements of §257.104(d)(1).



Signed: \_\_\_\_\_  
Certifying Engineer

Print Name: Steven F. Putrich  
Missouri License No.: 2014035813  
Title: Project Principal  
Company: Haley & Aldrich, Inc.

Professional Engineer's Seal:

